miface EN

Universal Interface with Ethernet TCP/IP / Serial Interface RS232/485/422

User's Manual

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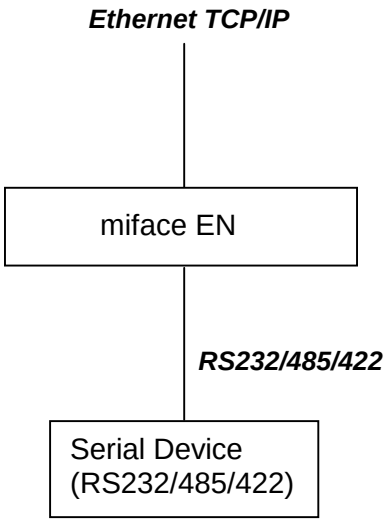
1 General

With the help of the universal interface, Ethernet frames are transmitted to the serial interface, and frames received by the serial interface are transmitted to the Ethernet.

DIP switches are included at the front panel for easy selection between RS232, RS485 or RS422 interface.

The device's mechanical design is intended for top-hat rail mounting.

2 System Overview



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3 Technical Data

Specifications

Interface 1:	Ethernet TCP/IP
Baud rate:	10/100 MBaud
Interface 2:	RS232/485/422
Baud rate:	300 Baud ...230.4 kBaud
Data format:	7 / 8 bits
Parity:	odd, no, even
Operating voltage:	24 VDC +/-20 %
Power consumption:	approx. 100 mA at 24 VDC
Housing:	combination housing
Housing dimensions:	26 x 105 x 70 mm (without clamp and mating plug)
Mounting:	top-hat rail, 35 mm DIN mounting rail
Protection:	front panel IP00
Operating temperature:	0...+50 ℃
Storage temperature:	-25...+60 ℃

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3.1 Configuration

3.1.1 Ethernet Interface

The interface is preset with the following network settings:

IP Address: 192.168.4.200
Net Mask: 255.255.255.0
Port: 10001

To change these parameters, proceed as follows:

Advice for Windows 7 users:
The Telnet client must be activated:
Start -> Control Panel -> Programs -> Turn Windows features on or off -> Telnet Client

- Switch the supply power for the interface on and connect it to the network hub with an RJ45 cable (1:1 cable) or directly to a PC (crosslink cable).

- Start the “MS DOS entry prompt” at your Windows PC.
  With Windows 7 you must have extended rights:
  Start -> All Programs -> Accessories -> double-click at Command Promp -> Run as Administrator

- Enter the desired IP address for the interface to the ARP table:
  ARP -S XXX.XXX.XXX.XXX 00-20-4A-xx-xx-xx <CR>

  XXX.XXX.XXX.XXX : desired IP address
  00-20-4A-xx-xx-xx : Ethernet MAC address of the interface (see label at the housing)

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- Establish a Telnet connection to port 1:
  TELNET XXX.XXX.XXX.XXX 1 <CR>

  This connection will fail (disconnect within 3 seconds). However, the IP address is temporarily changed.
  Close the Telnet window after acknowledging the error message.

- Establish a Telnet connection to port 9999:
  TELNET XXX.XXX.XXX.XXX 9999 <CR>

  After the connection has been established, immediately press the enter key (within 5 seconds) in order to enter the setup mode.

  - Enter “0” (Server).
  - Enter the desired IP address and press the enter key.
  - Repeatedly press the enter key until
    „Netmask: Number of Bits for Host Part (…)“ appears.
    Enter here the number of free bits for the IP address,
    f.e. „8“ for the netmask 255.255.255.0
    (=11111111.11111111.11111111.00000000) or
    “11“ for the netmask 255.255.248.0
    (=11111111.11111111.11111000.00000000) and press the enter key.
  - Repeatedly press the enter key until “Your choice?” appears.
  - Press “9” to save all settings (-> the Telnet connection is interrupted).

  Configuration of the Ethernet interface is now complete.
  Now, the control frame can be transmitted to the interface via the selected IP address (TCP/IP connection via port 10001).

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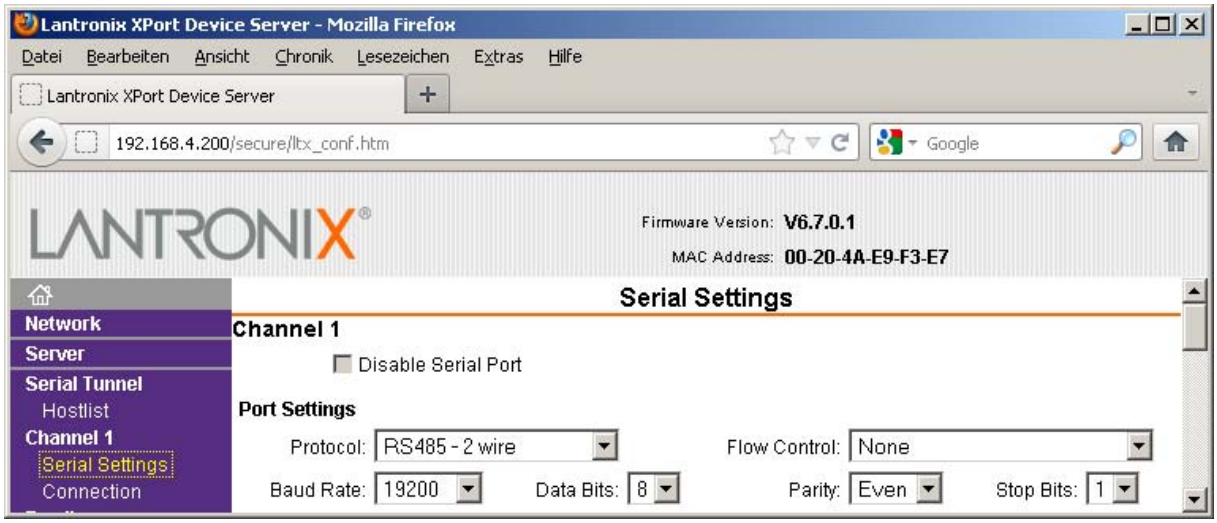
3.1.2 Serial Interface

- Start your web browser (e.g. Mozilla Firefox or Internet Explorer).
- Input the IP address into the address field.
- Press button *"OK"* in the authentification dialog and select *"Channel 1"* -> *"Serial Settings"* in the left menu:



Several parameters of the serial interface can be set in the area *"Channel 1"*:

Port Settings / Protocol
Interface selection according to DIP switch settings of chapter "Interface Selection".

Port Settings / Flow Control, Baud Rate, Data Bits, Parity, Stop Bits
Interface parameters are defined here.

- After changing, first press *"OK"* button and then *"Apply Settings"* in the left menu window.

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3.2 Operation / Functionality

After establishing an active connection to the network (via IP address and port) and connecting a serial device, the interface is ready for data exchange.

Ethernet TCP/IP data are output to the serial interface 1:1.
In inverse direction, frames from the serial side are transmitted to the Ethernet.

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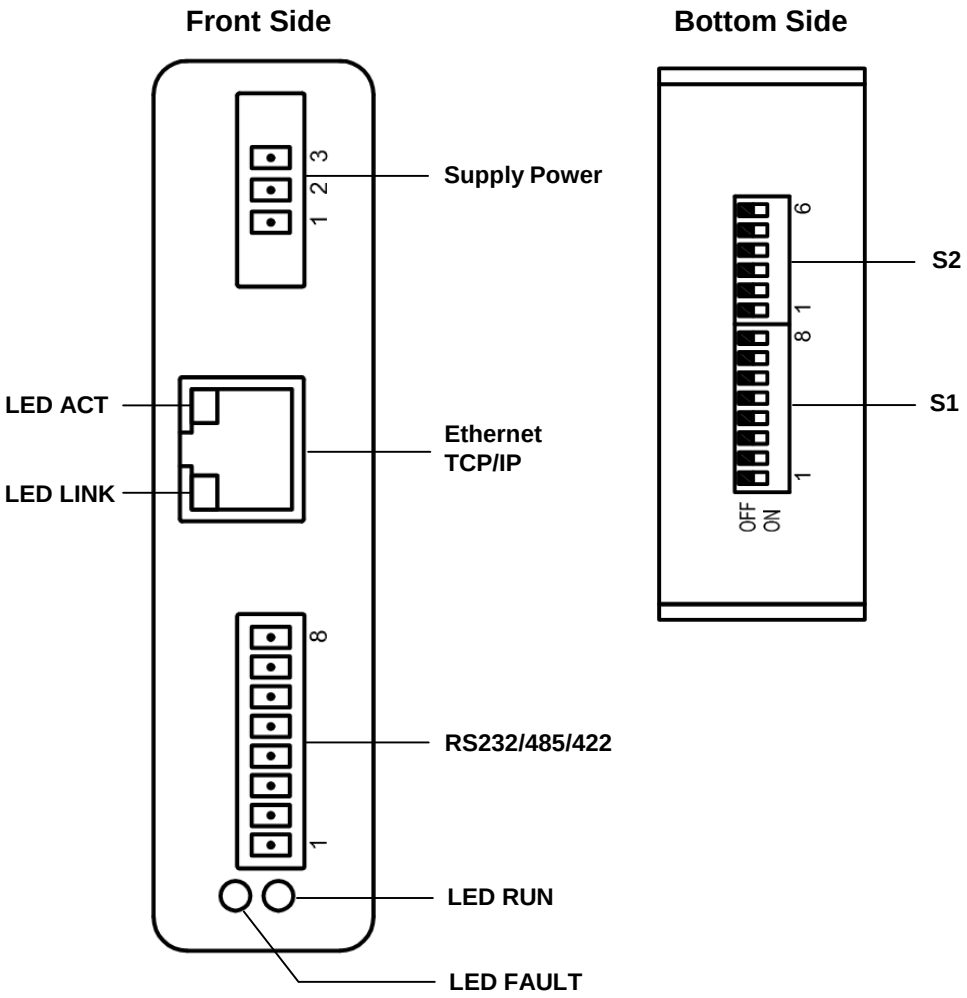
4 Connector Pin Assignments



4.1 LEDs

LED	Status	Meaning
ACT	Green	Full-Duplex
	Yellow	Half-Duplex
	Off	No network activity
LINK	Green	Physic. network connection with 100 MBaud
	Yellow	Physic. network connection with 10 MBaud
	Off	No physical network connection
FAULT	Red	No active TCP/IP connection
	Off	Active TCP/IP connection
RUN	Green	No data traffic at the serial interface
	Blinking	Data traffic at the serial interface

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4.2 Connectors

Supply Power

Pin	Assignment
1	+24 VDC
2	GND
3	PE

Ethernet TCP/IP
for network connection

RS

Pin	RS232	RS485	RS422
1	RxD		
2	TxD		
3	GND	GND	GND
4		Rx/Tx +	Rx +
5		Rx/Tx -	Rx -
6			Tx +
7			Tx -
8	PE	PE	PE

4.3 Interface Selection

Desired Interface	Switch S2						Switch S1*
	DIP1	DIP2	DIP3	DIP4	DIP5	DIP6	DIP1
RS232	ON	OFF	OFF	OFF	OFF	OFF	OFF
RS422 without bus termination	OFF	ON	OFF	OFF	OFF	OFF	OFF
RS422 with bus termination	OFF	ON	OFF	OFF	ON	ON	OFF
RS485 without bus termination	OFF	ON	ON	ON	OFF	OFF	ON
RS485 with bus termination	OFF	ON	ON	ON	ON	ON	ON

*Remaining switches of S1 must be set in “OFF“ position.

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5 Appendix

5.1 Reset to Factory Settings

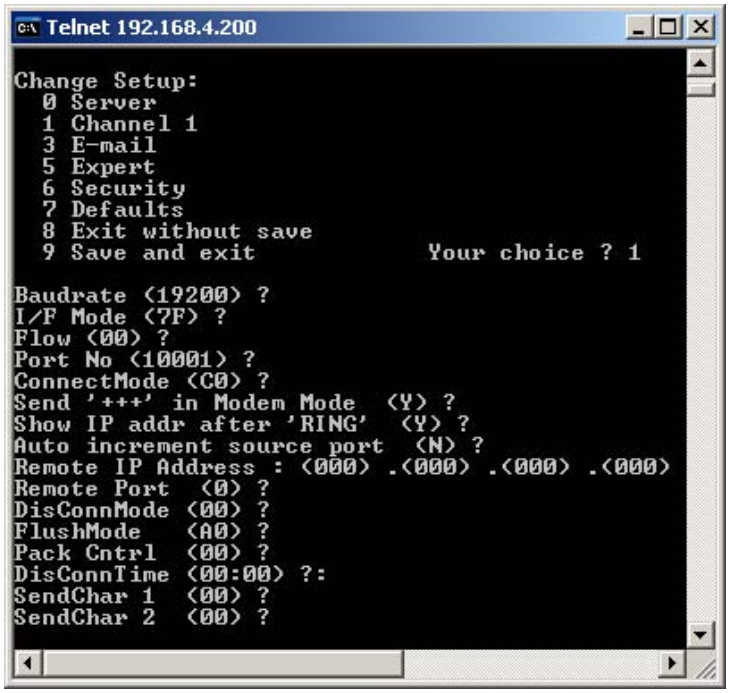
The interface is already pre-configured at delivery and can be adjusted with the settings, described in chapter “Configuration”.
Following description shows how to reset the factory settings (e.g. if there is any error).
The IP address is not affected by the following changes. Please refer chapter “Ethernet Interface” if you want to change it.

- Establish a Telnet connection to port 9999:
  TELNET XXX.XXX.XXX.XXX 9999 <CR>

  After the connection has been established, immediately press the enter key (within 5 seconds) in order to enter the setup mode.

- Enter “7” (Defaults).

- Enter “1” (Channel 1) and adapt following settings:



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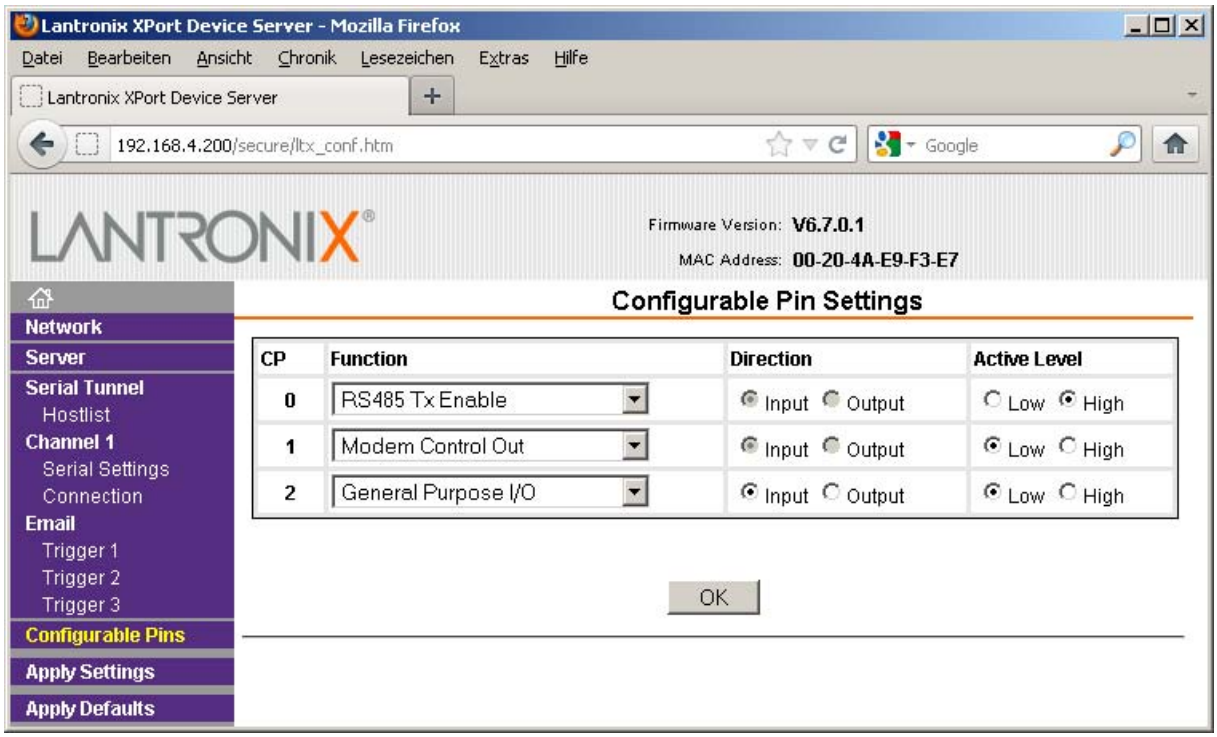
- Press “9” (Save and exit) followd by “Enter” to save the settings.
- Close the Command Prompt.
- Start your web browser (e.g. Mozilla Firefox or Internet Explorer).
- Enter IP address into address field.
- Press button *”OK”* in the authentification dialog and select *“Configurable Pins”* in the left menu.
- Use following settings:



- Confirm with *“OK”* button and select *“Apply Setting”* in the left menu window.

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5.2 Guarantee

The device is guaranteed for the duration specified in the “General Terms and Conditions” regarding manufactured products and services rendered for the electrical industry against defects which existed at the time the device was delivered to the buyer.

The device is subject to technical change without notice. Errors and omissions are accepted. No claims can be honored for the shipment of a new product. The buyer is required to make notification of defects within 2 weeks after identification of such. Non-observance of notification requirements is equated with acceptance of the defect.

Defects and their symptoms must be described as accurately as possible in order to allow for reproducibility and elimination. The buyer must provide for access to all required and/or useful information regarding defects at no charge, as well as to the affected devices, and must make all of the required data and machine time available free of charge.

The guarantee does not cover defects, which result from non-observance of the prescribed conditions of use, or from improper handling.

If the device has been placed at the disposal of the buyer for test purposes and has been purchased subsequent to such testing, both parties agree that the product is to be considered “used” and that it has been purchased “as is”. No guarantee claims may be made in such cases.

The “General Terms and Conditions” regarding manufactured products and services rendered for the electrical industry apply as well.

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5.3 Declaration of Conformity

EG-Konformitätserklärung
Declaration of EC-Conformity

Produktbezeichnung: **miface EN**
Product: Universal-Interface Profibus-DP

Hersteller:
Manufacturer:
microSYST Systemelectronic GmbH
Zur Centralwerkstätte 10
D-92637 Weiden

Das bezeichnete Produkt stimmt mit der folgenden Europäischen Richtlinie überein: We herewith confirm that the above mentioned product meets the requirements of the following standard:		**Die Übereinstimmung des bezeichneten Produktes mit den Vorschriften der Richtlinie wird nachgewiesen durch die vollständige Einhaltung folgender Normen:** The correspondance of the above mentioned product with these requirements is proved by the fact that these products meet with the following single standards:
Nummer	**Bezeichnung**	**Europäische Norm**
2004/108/EG	**Elektromagnetische Verträglichkeit (EMV)**	EN61000-6-2:2006
		EN61000-6-3:2007

Weiden, den 23.Mai 2012

ppa. H. Kilian

Harald Kilian

Prokurist
Authorized Signatory

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5.4 Versions Overview

Version	Date	Comments
1.00	2012-09-26	Document created

Certified per **DIN EN ISO 9001:2008**.

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